

**Test Preparation Study Guide  
for  
Coal Miner Certification**



**SURFACE MINE FOREMAN**

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*This guide was developed for the Utah Labor Commission by Bruno Engineering, Price, Utah.*

# **SURFACE MINE FOREMAN STUDY GUIDE**

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## **SAMPLE QUESTIONS FOR LAW – 30 CFR, Part 77**

1. Escape and evacuation plans shall:
  - a. Be established and kept current
  - b. Include exits from all work areas, building and equipment
  - c. Be made known to all employees
  - d. All of the above
2. To make miners aware of any government actions, the mine operator must:
  - a. Conduct a special training session each time an order or citation is issued
  - b. Publish such information in the local paper
  - c. Post any such notices
  - d. Send a miners representative to public hearings
3. Men shall not work between equipment and dangerous highwalls except:
  - a. When necessary to correct unsafe conditions
  - b. When special safety precautions are taken
  - c. When there is no hindrance for escape from falls or slides
  - d. All of the above
4. Paragraph 215 Section 111, of the Act deals with:
  - a. Inspections, investigations and record keeping
  - b. Citations and orders
  - c. Entitlement of miners
  - d. Coverage of the Act
5. What are the responsibilities of a mine foreman with regards to safety?
  - a. Assigning a person to a work area or piece of equipment which he is qualified to operate
  - b. Seeing that his employees work in a safe, careful manner and abide by all company safety rules and regulations
  - c. Informing the workers of any hazardous conditions before sending them into a new work area
  - d. All of the above
6. During a general inspection with more than one inspector in the same area, the number of miners' representatives needed to accompany the inspection party is:
  - a. One miners' representative for each inspector
  - b. One miners' representative for each agent acting in the capacity of the operator
  - c. One miners' representative in the area regardless of other numbers
  - d. One miners' representative from each working shift

7. The purpose of the MSHA Act of 1977 is to:
  - a. Improve the quality of coal mines
  - b. Aid in the production of coal in the United States
  - c. Assure safe and healthful working conditions
  - d. None of the above
8. Can a State or Federal mine inspector gain access to a mine “without a search warrant?”
  - a. Yes
  - b. No
  - c. The Federal inspector must have a search warrant
  - d. The State inspector must have a search warrant
9. Loading and haulage equipment having defects affecting safety shall be:
  - a. Recorded and reported to the mine operator
  - b. Reported only
  - c. Recorded as a matter of record only
  - d. None of the above
10. According to MSHA, persons who use or handle explosives shall be:
  - a. Required to be certified by MSHA
  - b. Experienced men who understand the hazards involved or trainees working under direct supervision of experienced men.
  - c. Required to undergo extensive formal training
  - d. All of the above
11. “Permissible” means:
  - a. Equipment, machines or devices which have been approved by the State
    - i. Mine Inspector
  - b. Equipment, machines or devices which met with union standards
  - c. Equipment, machines or devices which have been inspected daily by a qualified person
  - d. Equipment, machines or devices which have been tested and approved by MSHA
12. A foreman is the immediate supervisor responsible for:
  - a. Meeting production schedules any way possible
  - b. The health and safety of employees
  - c. Escorting mine inspectors on inspections
  - d. All of the above
13. Miners’ representatives will be called upon to accompany Federal mine inspectors:
  - a. During complaint inspections
  - b. During spot inspections
  - c. Only during general inspections
  - d. All of the above

14. According to MSHA, the maximum permissible noise level exposure for any length of time is:
  - a. 95 dBA
  - b. 100 dBA
  - c. 110 dBA
  - d. 1,115 dBA
15. What is the maximum noise level, according to MSHA, that a worker can be exposed to for an eight-hour work period?
  - a. 115 dBA
  - b. 90 dBA
  - c. 80 dBA
  - d. 85 dBA
16. Hoists and elevators must be inspected daily and the examinations must include:
  - a. A visual examination of the rope
  - b. Examination of automatic controls
  - c. Examination for defective or broken parts
  - d. All of the above
17. Who is most important in promoting and maintaining an effective health and safety program?
  - a. Mine operator
  - b. Safety supervisor
  - c. State Mine Inspector
  - d. Foreman
18. One portable fire extinguisher shall be provided:
  - a. In every office
  - b. Next to mechanical repair work
  - c. At each location where welding, cutting or soldering is performed
  - d. Every 10 feet per 5,000 square feet of space
19. A personal citation which may be issued to a miner by MSHA is for:
  - a. Smoking in a prohibited area
  - b. Failure to report to work
  - c. Disobeying a closure order from MSHA
  - d. Willfully violating a mandatory health and safety rule
20. Cases or boxes of explosives shall not be stored in magazines on their ends or sides not stacked more than:
  - a. 5 feet high
  - b. 8 feet high
  - c. 3 feet high
  - d. 6 feet high

21. Federal regulations require operators to provide training and retraining for:
  - a. Each miner working in a mine
  - b. Each certified person in a mine
  - c. Each qualified person in a mine
  - d. All employees as required by the Act
22. The Federal Mine Safety and Health Act of 1977 defines an “accident” as:
  - a. Only those occurrences in which death or serious injury occurs
  - b. Any potential situation in which negligence caused an injury
  - c. A mine fire, explosion, ignition, injury to, or death of a person
  - d. An incident which caused an injury which otherwise could have been avoided
23. MSHA requires there be a conspicuous bulletin board at each mine with what posted on it?
  - a. Decisions regarding mining laws or regulations
  - b. Citations received by the mines
  - c. Orders and notices received from MSHA
  - d. All of the above
24. A complaint from a miner to MSHA concerning a hazard in the mining operation:
  - a. Must be made verbally to an MSHA inspector
  - b. Can be made to MSHA only after the mine operator has refused to correct the situation
  - c. Must indicate the miner’s name on the mine operator’s copy
  - d. Remains anonymous to the mine operator, although the miner’s name is to be made known to MSHA
25. Miners’ representatives are appointed by:
  - a. Subdistrict office managers of MSHA
  - b. Company officials
  - c. Fellow workers
  - d. By the state in which they work
26. Administration of the Federal Mine Safety and Health Act of 1977 falls under the Department of:
  - a. The Interior
  - b. Labor
  - c. Health, Education and Welfare
  - d. Environmental Quality
27. A miner (or miners’ representative) may accompany an inspection team:
  - a. And will not lose pay for the time involved
  - b. Without pay
  - c. Only upon special request and with management approval
  - d. None of the above

28. A new surface miner with no previous mining experience is required to have how many hours of safety training?
- a. 8 hours
  - b. 12 hours
  - c. 24 hours
  - d. 40 hours
29. Annual refresher training is required for:
- a. Supervisor's only
  - b. Hourly personnel only
  - c. Superintendents and General Managers
  - d. All personnel who are exposed to the hazards of mining



**ANSWER SHEET FOR  
LAW – 30 CFR, Part 77**

1. d
2. c
3. d
4. c
5. d
6. c
7. c
8. a
9. a
10. b
11. d
12. b
13. d
14. d
15. d

16. d
17. d
18. c
19. a
20. d
21. d
22. c
23. d
24. d
25. c
26. b
27. a
28. c
29. d

## **SAMPLE QUESTIONS FOR GENERAL MINING**

1. When safety belts or lines are in use and there is a danger of falling:
  - a. A catch net must be provided under the worker or workers
  - b. A second person shall tend the lifeline when bins, tanks or other dangerous areas are entered
  - c. Personnel may be raised only to a height of 50 feet
  - d. All of the above
2. A fireproof barrier shall be constructed between old and new refuse piles, which material may be:
  - a. Clay or inert material
  - b. Dirt
  - c. Rock
  - d. Limestone
3. For new or proposed refuse piles, markers shall be placed within \_\_\_\_\_ days from acknowledgment of the proposed location of a new refuse pile:
  - a. 10
  - b. 20
  - c. 30
  - d. 60
4. When fans are used to ventilate draw-off tunnels the fan shall be:
  - a. Installed in fireproof housings and connected to the tunnel openings with fireproof ducts
  - b. Installed on the surface
  - c. Offset from the tunnel opening
  - d. All of the above
5. A competent or qualified person should be in charge:
  - a. During blasting operations
  - b. During electrical maintenance work
  - c. During hoisting operations
  - d. At all times when men are working
6. No employee shall be assigned, allowed or be required to perform work alone in any area where conditions exist that would endanger his safety unless:
  - a. He can communicate with others
  - b. He can be heard
  - c. He can or will be seen at predetermined intervals
  - d. All of the above

7. Lighting shall be provided in and on all surface structures, paths, walk-ways, stairways, loading and dumping sites:
  - a. During evening and night shifts
  - b. Only if other methods of illumination are not provided
  - c. Of sufficient intensity to provide safe working conditions
  - d. None of the above
8. Inexperienced employees should be assigned to work with experienced personnel:
  - a. For the first month on the job
  - b. Until the experience person feels they are able to work safely
  - c. For the first two months on the job
  - d. Until the inexperienced person has acquired the necessary job skills to
    - i. perform his duties safely
9. All water, sediment, or slurry impoundments shall be examined by a qualified person at intervals not exceeding \_\_\_\_\_ days for appearance of structural weakness and other hazardous conditions:
  - a. Once each shift
  - b. Every 24 hours
  - c. Every 7 days
  - d. None of the above
10. Why are safety rules a good idea?
  - a. To cover hazards not covered in the State or Federal mining statutes
  - b. To lower accident frequencies at the mine site
  - c. To reinforce State or Federal mining statutes
  - d. All of the above
11. Who is authorized to take noise surveys and dust samples?
  - a. The mine foreman
  - b. The mine superintendent
  - c. A person designated by the mine operator
  - d. A person qualified by MSHA
12. After the initial certifications required by this section, certifications shall be submitted every \_\_\_\_\_ month from the initial certification for all refuse piles which are activated:
  - a. Third
  - b. Sixth
  - c. Ninth
  - d. Twelfth

13. "Flash Point" means:
- Melting point of a solid
  - Boiling point of a liquid
  - The minimum temperature at which sufficient vapor is released by a liquid or solid to form a flammable vapor-air mixture at atmospheric pressure
  - All of the above
14. Any place in a surface mine where miners are normally required to work or travel is called:
- Active workings
  - Work zone
  - Safety workings
  - Travel zone
15. If the escape way in a draw-off tunnel is inclined more than \_\_\_\_\_ degrees from the horizontal it shall be equipped with a ladder:
- 15
  - 20
  - 30
  - 45
16. What is required on any permanent ladder?
- That it be anchored securely
  - That it have hand rails
  - That it have platforms every 30 feet
  - All of the above
17. Which state agency has control of water impoundments?
- Departments of Mines and Minerals
  - Department of Environmental Quality
  - Department of Water Quality
  - None of the above
18. A permanent identification marker shall be \_\_\_\_\_ feet high for each refuse pile:
- 4
  - 5
  - 6
  - 7
19. Protective gloves should be worn:
- At all times
  - When handling materials which may cause injuries
  - Only when handling electrical cables as most injuries occur when gloves become caught in machinery
  - Only a and b

20. "PNEUMOCONIOSIS" is:
- A lung disease
  - A skin disease caused by dust
  - An eye condition caused by dust
  - A disease that is not caused by dust
21. How often shall active working areas be inspected?
- Every shift
  - Weekly
  - Monthly
  - None of the above
22. A permanent identification marker shall be located on or immediately adjacent to new or proposed water, sediment, or slurry impounding structures within \_\_\_\_\_ days from the start of construction:
- 15
  - 30
  - 60
  - 120
23. One way to prevent accidents and injuries to miners is to:
- Keep equipment and structures clean
  - Provide shelter enclosures for inclement weather condition
  - Maintain structures and equipment in good repair
  - All of the above
24. Crossovers shall be provided where:
- At a moving conveyor where it is crossed
  - Over belt drives
  - Near tail pieces
  - All of the above
25. Barricades, signs or other effective means to prevent unauthorized entry shall be provided where final preparations are being made in:
- Drilling areas
  - Blasting areas
  - Reclamation areas
  - Bench areas
26. A circular escape way in a tunnel which is closed at one end shall be a minimum:
- 30 inches in diameter
  - 20 inches in diameter
  - 48 inches in diameter
  - 60 inches in diameter

27. Travelways where men must walk are required to be:
- Installed and maintained to all working areas
  - Kept clear of stumbling and slipping hazards
  - Constructed of non-skid material if walkways incline
  - All of the above
28. A topographic map shall show at a scale not to exceed 1 inch = \_\_\_\_\_ feet, the present and proposed maximum extent of the refuse pile and the area 500 feet around the proposed maximum perimeter:
- 100
  - 200
  - 300
  - 400
29. Tunnels located below stockpiles, surgepiles, and coal storage silos must be ventilated so as to maintain concentrations of methane below:
- 0.5%
  - 1.0%
  - 2.0%
  - 2.5%
30. Which of the following best describes a barricade?
- A pile or mound of material capable of restraining a vehicle
  - A pile of debris used to impede traffic
  - A pile or mound of material which obstructs the passage of persons,
    - vehicles or flying materials
  - An obstruction preventing equipment from being in plain view
31. Monitoring devices shall be set to de-energize automatically electric equipment when the concentration of methane reaches what percentage?
- 1.0%
  - 1.5%
  - 2.0%
  - 2.5%
32. Men should not walk or stand above:
- Surge piles
  - Storage piles
  - Reclaiming areas
  - All of the above

33. New refuse piles and additions to existing refuse piles shall be constructed in compacted layers not exceeding \_\_\_\_\_ feet in thickness and shall not have a slope exceeding two to one:
- a. 1
  - b. 2
  - c. 3
  - d. 4
34. According to statute, inspection of each working area will be made by a certified person at least:
- a. Once each day
  - b. Once each week
  - c. Once each shift
  - d. None of the above

## **ANSWER SHEET FOR GENERAL MINING**

1. b  
2. a  
3. c  
4. d  
5. d  
6. d  
7. c  
8. d  
9. c  
10. d  
11. d  
12. d

13. c  
14. a  
15. c  
16. d  
17. b  
18. c  
19. b  
20. a  
21. a  
22. b  
23. c  
24. a

25. b  
26. a  
27. d  
28. d  
29. b  
30. c  
31. c  
32. d  
33. b  
34. c



## **SAMPLE QUESTIONS FOR ELECTRICAL**

1. Rubber lineman's gloves shall be inspected for defects:
  - a. Once each shift
  - b. Before use on each shift and once thereafter
  - c. Once each day
  - d. None of the above
2. Bare signal wires that are readily accessible to personal contact shall not carry more than:
  - a. 20 volts
  - b. 30 volts
  - c. 40 volts
  - d. 50 volts
3. Unless identification can be made readily by location, circuit breakers and disconnecting switches shall be
  - a. Disconnected
  - b. Labeled to identify the units they protect
  - c. Removed from service
  - d. Provided with a schematic
4. Surface transformers should be isolated and above ground a minimum of:
  - a. 6 feet
  - b. 8 feet
  - c. 10 feet
  - d. 12 feet
5. Once you have locked out a piece of equipment, who may remove the lock?
  - a. Anyone on your crew
  - b. Only you
  - c. You or any other authorized representative of the mine
  - d. All of the above
6. A disconnect device for a high voltage circuit must be designed so that it may be determined that the device is open by what type of inspection?
  - a. Physical
  - b. Test
  - c. Visual
  - d. Preliminary
7. To protect yourself from electrical injury:
  - a. Report any electrical shocks from touching equipment to your supervisor
  - b. Report any electrical arcs you see to your supervisor
  - c. Operate equipment that is not grounded with caution until end of shift
  - d. Both a and b

8. The definition of a high voltage potential according to MSHA is:
  - a. 125 volts
  - b. Over 480 volts
  - c. Over 650 volts
  - d. Over 1000 volts
9. According to Federal requirements, the minimum months of experience required to become qualified to do electrical work in a mine are:
  - a. 6 months
  - b. 12 months
  - c. 18 months
  - d. 24 months
10. Insulating mats, dry wooden platforms or other electrically non-conductive material shall be kept in place at all:
  - a. Switchboards
  - b. Power control switches
  - c. Both a and b
  - d. Neither a or b
11. Suitable danger signs should be posted:
  - a. Only on high voltage equipment
  - b. Only on transformers
  - c. At all major electrical installations
  - d. All of the above
12. When power lines in the area have a voltage of between 345 and 449 thousand volts, the minimum distance between equipment and the power lines shall be:
  - a. 12 feet
  - b. 15 feet
  - c. 20 feet
  - d. 25 feet
13. Power lines above driveways, haulageways and railroad tracks shall provide the specified minimum vertical clearance. However, in no case shall the distance from the ground to the power lines be less than:
  - a. 15 feet
  - b. 17 feet
  - c. 19 feet
  - d. 25 feet
14. Can an MSHA Certified Electrician have a crew of uncertified men working for him?
  - a. Yes
  - b. No
  - c. Yes, but he is responsible for directions and safety
  - d. No, only one untrained man at a time may work for him

15. What kind of protection should be installed to take care of overloads and short circuits?
  - a. Bond wire
  - b. Circuit breakers or fuses
  - c. Capacitors
  - d. Low voltage transformers
16. Areas surrounding electric substations shall be free of combustible materials for a distance of at least:
  - a. 15 feet
  - b. 25 feet
  - c. 35 feet
  - d. 45 feet
17. What kind or kinds of power can be supplied by a power distribution center?
  - a. AC power only
  - b. DC power only
  - c. AC and DC power
  - d. None of the above
18. According to MSHA regulations, medium voltage is considered to be:
  - a. 661 to 1000 volts
  - b. Below 300 volts
  - c. 300 to 650 volts
  - d. 150 to 800 volts
19. An electric current flowing in one direction only and usually free of pulsation is called:
  - a. Direct current
  - b. Alternating current
  - c. Ohms
  - d. Volts
20. Which of the following would be a characteristic of an improperly made permanent cable splice?
  - a. Mechanically strong with adequate electrical conductivity
  - b. Flame resistant and good outer jacket bonding
  - c. Bare wire exposed
  - d. Effectively insulated and sealed

## **ANSWER SHEET FOR ELECTRICAL**

1. b
2. c
3. b
4. b
5. b
6. c
7. d
8. d
9. b
10. c

11. c
12. d
13. a
14. c
15. b
16. b
17. c
18. a
19. a
20. c

## **SAMPLE QUESTIONS FOR MECHANICAL**

1. Safety chains or suitable locking devices must be used:
  - a. On all high, pressure hose connectors of one inch inside diameter or larger
  - b. Between short hoses of two inches or more inside diameter
  - c. Both a and b
  - d. None of the above
2. If a safety-related system is found seriously defective on a piece of equipment, the operator should:
  - a. Go home
  - b. Report it and continue to work using extreme caution
  - c. Report it and shut the equipment down
  - d. Finish shift and then report it
3. If a person desires to cross a moving conveyor, they shall:
  - a. Climb on one side and off the other side provided the conveyor is not loaded
  - b. Cross only at designated cross-over points
  - c. Crawl under the conveyor provided there is three feet of clearance
  - d. Cross at areas provided with a start/stop switch
4. Pipe wrenches should be used on:
  - a. Square nuts
  - b. Round objects
  - c. Manifold nuts
  - d. Hexagon nuts
5. If one of your employees reports an unsafe condition on equipment, you should:
  - a. Let it go and let the next shift take care of it
  - b. Check the condition and if it is a hazard, take steps to correct the condition
  - c. Have him run the equipment until end of shift, then take it to the shop for repair
  - d. Have him operate the equipment until a mechanic arrives to repair it
6. All fuel-powered tools shall be stopped while being:
  - a. Refueled
  - b. Serviced
  - c. Maintained
  - d. All of the above
7. The type of socket wrench which measures the amount of force you put on the wrench is a:
  - a. Torque wrench
  - b. T-handle wrench
  - c. Ratchet wrench
  - d. Speed-handle wrench

8. Hand-held power tools must be equipped with:
  - a. Lock-in switches
  - b. Constant pressure controls
  - c. No switch at all
  - d. None of the above
9. Valves on compressed gas cylinders must be protected by covers when:
  - a. Used
  - b. Stored
  - c. Transported
  - d. All of the above
10. Which of the following is **not** a valid safety rule for the portable electric drill?
  - a. Stock to be drilled must be held in a stationary position
  - b. Place the base of the drill firmly on the stock before starting the motor
  - c. When drilling deep holes with a twist drill, withdraw the drill several times to clear cuttings
  - d. Always remove the drill bit from the chuck as soon as you have completed your work
11. When you use a chisel for chipping you should:
  - a. Wear goggles
  - b. Make sure men working near you are protected
  - c. Put up a screen to prevent chips from flying
  - d. All of the above
12. What is the importance of a pressure release shut-off control switch on hand-held equipment?
  - a. The equipment shuts off immediately when pressure is released
  - b. It slows the operating speed or the equipment reducing the chance of injury
  - c. Makes the tool wear longer
  - d. The quality of work is enhanced
13. Anyone using a grinding wheel must:
  - a. Stand at least three feet away
  - b. Wear gloves
  - c. Always wear a face shield or goggles
  - d. All of the above
14. Men shall not work on or from a piece of mobile equipment that is in a raised position until:
  - a. Raised by hydraulic jacks
  - b. All power has been disconnected
  - c. Blocked in place securely
  - d. None of the above

15. If a tagged piece of equipment is needed for an emergency job, you should:
- Leave the tag on the equipment and allow it to be used only for emergencies
  - Remove the tag while equipment is in use and promptly replace the tag afterwards
  - Persons may use the tagged equipment if the necessary precautions are taken
  - Inform people needing the tagged equipment that it is out of service until it has been repaired and the tag is removed by a qualified person
16. Which is the most correct statement concerning adequate mobile equipment warning devices?
- Every type of equipment in the mine must have a loud horn that is sounded continually when equipment is put in reverse
  - Shovels, drag lines and tractors must have warning devices that are sounded by the operator prior to operation
  - Mobile equipment must have warning devices that sound when the equipment is put into any forward gear
  - All of the above
17. Makeshift or inadequate machine guards are especially hazardous because they are:
- Easily ignored
  - Hard to install and remove
  - Likely to fail when needed
  - Hard to adjust
18. To protect persons from possible hazard in case of runaway or movement, railroad equipment must be equipped with:
- Adequate backstops
  - Rubber guards
  - Dead man switches
  - None of the above
19. Repairs or maintenance shall **not** be performed on mobile equipment until the:
- Power is off
  - Machinery is blocked against motion
  - Equipment is tagged out
  - Both a and b
20. What should you **not** do when checking a battery?
- Short battery post to establish battery power
  - Use a battery tester or test each cell with a hydrometer
  - Be sure switch is off when reconnecting battery
  - Turn on all lights and try to start the engine

21. What prevents serious injuries in the event of wheel breaking on a stationary grinding machine?
- Peripheral hood that covers the wheel
  - Gloves worn by the worker
  - Leather apron worn by the worker
22. Belt dressings shall **not** be applied while belts are in motion except where it can be applied:
- Quickly
  - Without damaging the belt
  - Without hazard
  - None of the above
23. Before reaching for exposed mechanical power transmission equipment elevated out of normal reach, you should:
- Have unnecessary workers leave the area
  - See that all mechanical guards are in place
  - Make sure all power is shut off and locked out
  - All of the above
24. All welding areas shall be:
- Well ventilated
  - Shielded
  - Easily accessible
  - Only a and b
25. Applying heat to a specific volume of gas in a closed container will:
- Increase the gas pressure
  - Increase the gas volume
  - Decrease the gas volume
  - Decrease the gas pressure
26. What can you use as a cleaning agent on machinery parts?
- Kerosene
  - Gasoline
  - Diesel fuel
  - None of the above
27. When welding over a conveyor belt, what should be done?
- Protect the belt with a fireproof cover
  - move belt before welding
  - Weld with an electric arc
  - None of the above



28. An obvious violation of safety procedure is:
- Using a combination lock
  - Removing or overriding the locks of others
  - Placing two locks on machine controls
  - Unplugging the machine
29. When may guards be removed?
- When machinery is being operated
  - When machinery is being tested
  - When guard hinder the production
  - Guards may never be removed
30. The hammer used most often by mechanics is the:
- Brass hammer
  - Rawhide-faced hammer
  - Claw hammer
  - Ball-peen hammer
31. When any mobile or stationary equipment is **not** in safe condition, it must be:
- Repaired before the beginning of the next shift
  - Used with special care
  - Removed from service immediately
  - All of the above

## **ANSWER SHEET FOR MECHANICAL**

1. c
2. c
3. b
4. b
5. b
6. d
7. a
8. b
9. d
10. d
11. d
12. a
13. c
14. c
15. d
16. b

17. c
18. a
19. d
20. a
21. a
22. c
23. c
24. d
25. a
26. d
27. a
28. b
29. b
30. d
31. c

## **SAMPLE QUESTIONS FOR HAULAGE AND DUST CONTROL**

1. What exterior lighting is required on haulage trucks after dark?
  - a. Headlights, taillights, turn signals and stoplights
  - b. Headlights, side clearance lights, taillights and stop lights and back-up lights
  - c. headlights, side floodlights, stop lights, taillights and brake lights
  - d. None of the above
2. When starting up a piece of equipment, the transmission or directional control should be in the:
  - a. Forward position
  - b. Reverse position
  - c. Neutral position
  - d. None of the above
3. When should drivers inspect their trucks?
  - a. Once each shift
  - b. At the beginning of the shift and after each stop that requires dismounting of the operator
  - c. At the beginning of each shift and hourly thereafter
  - d. Once each shift and whenever the truck acts or feels differently
4. When putting water on roads for dust control, what should be avoided?
  - a. Putting on too much soap
  - b. Using contaminated water
  - c. Putting down too much water
  - d. Wetting down stationary equipment
5. When traveling on haulage roads, loaded trucks should usually be:
  - a. Allowed to drive where they need
  - b. Forced to give the right of way to other traffic
  - c. given the right of way
  - d. Allowed to drive on the inside of all curves
6. Where is the greatest danger of an explosion of coal dust?
  - a. Outside atmospheres
  - b. Inside atmospheres
  - c. Where allowed to accumulate
  - d. All of the above

7. Personnel may be transported:
  - a. In or on equipment specifically designed for that purpose
  - b. In buckets of empty equipment
  - c. On or in almost any equipment used in mining operations
  - d. All of the above
8. Can an end dump truck be permitted to drive with its hoist up?
  - a. Yes
  - b. No
  - c. Hoist should be mid-way
  - d. Yes, hoists must always be in locked upright position when in transit
9. When the driver of a haul unit is having their truck loaded at a shovel the driver should:
  - a. Stand on the platform
  - b. Stay in the cab
  - c. Get out of the truck
  - d. Stand on the ladder
10. Where conveyor belts are installed overhead, what precautions should be taken?
  - a. Men below the belt must be protected from falling material
  - b. Area below conveyor belts must be posted as hazardous
  - c. Hard hats must be worn
  - d. Men may not and are not allowed below conveyor belts when it is in operation
11. If you are wearing a dust-sampling device, you should:
  - a. Wear it only while you are in the pit
  - b. Wear it only while you are wearing a respirator
  - c. Wear it for the entire shift
  - d. Wear it only in dusty condition
12. It is permissible to drive over a trailing cable if:
  - a. The power is off
  - b. You notify the operator first
  - c. The ground is soft so the cable sinks into the mud
  - d. None of the above
13. How can the explosibility of coal dust be reduced?
  - a. By removing oxygen
  - b. By watering it down
  - c. By mixing with incombustible material
  - d. All of the above

14. When is water needed on haulage roads?
  - a. In hot, dry weather
  - b. In freezing weather
  - c. When needed to melt snow
  - d. All of the above
15. Before starting or moving a haul unit, a driver should:
  - a. Sound the horn
  - b. Make a walk around inspection
  - c. Check mirrors
  - d. All of the above
16. Must hard hats be worn in truck?
  - a. Yes
  - b. No
  - c. Only if the cab does not provide adequate protection overhead
  - d. Only in work areas, which require hard hats
17. The riding on a conveyor belt is:
  - a. Allowed for a short distance
  - b. Allowed for long distances
  - c. Forbidden except where specifically designed to transport persons
  - d. For the maintenance personnel only
18. When the brakes or steering on mobile production equipment shows evidence of improper operation, the foreman should:
  - a. Shut the equipment down and call maintenance for immediate repair
  - b. Allow the equipment to operate until they fail and then call maintenance
  - c. Advise the operator to use caution in the operations until the end of the shift when it can be repaired
  - d. Assign the equipment to the best operator until repairs can be made
19. A walk around inspection is required only on:
  - a. Trucks
  - b. Loaders
  - c. Cats
  - d. All of the above
20. Equipment that is in an unsafe operating condition must be:
  - a. Removed from service
  - b. Used with caution
  - c. Repaired as soon as possible
  - d. Both b and c

21. The particulate respirator removes dust from the air by:
- Chemical reaction with contaminants in the air
  - Providing an independent air supply from compressed air cylinders
  - Filtering out contaminants and allowing clean air to pass through
  - All of the above
22. If traveling in fog or dusty areas, a driver should
- Go faster to get through it
  - Turn on bright lights
  - Use extreme caution and turn on lights
  - Stop immediately off the side of the road and wait for clearing before proceeding
23. Set traffic patterns are advisable:
- So foreman can keep track of where equipment is working
  - To move the equipment in a safe and orderly procedure
  - To aid federal inspectors in their inspection of mine property
  - To avoid traffic jams
24. What can be transported with personnel in man-trip vehicles?
- Small hand tools
  - Explosives, if in a special cargo area
  - Mined minerals
  - None of the above
25. What is used to allay dust on roadways?
- Water
  - Magnesium chloride
  - Dust allaying agents
  - All of the above
26. When can men work or pass under buckets or booms of loaders in operation?
- During preventive maintenance
  - Only when operator is in cab of loader
  - Only if the loader is locked in the up position
  - Never
27. When should lights, flares or other warning devices be used on a parked vehicle?
- When a parked vehicle creates a hazard for other traffic
  - When a parked vehicle is parked on an incline
  - Only when a vehicle is parked after dark
  - All of the above

28. On what equipment are seatbelts required?
- a. Seatbelts are not required on any equipment
  - b. Seatbelts are required only on shovels and pickup trucks
  - c. Seatbelts are required only on equipment in which cabs are not enclosed
  - d. Seatbelts are required on all mobile equipment
29. Dust is a problem in haulage because of:
- a. Visibility
  - b. Health hazards
  - c. Both a and b
  - d. Neither a or b
30. How should conveyor belts be maintained?
- a. They should be kept well aligned
  - b. They should be well illuminated
  - c. They should be kept clean
  - d. All of the above
31. The most effective method to clear ice from haulage roads is:
- a. A patrol or grader
  - b. A scraper
  - c. Sand and salt
  - d. Salt only
32. Loading and haulage equipment shall be inspected by a competent person:
- a. At least once during each shift
  - b. After each shift
  - c. Before equipment is placed in operation
  - d. There is no inspection required
33. For drainage, all haulage roads should be:
- a. Built with run-off channels
  - b. Built sloping into a hill
  - c. Built with drainage ditches on either side
  - d. Built with either a crown or slope
34. When shutting off a hot diesel engine, it should be allowed to cool at least:
- a. 2 minutes
  - b. 1 minute
  - c. 5 minutes
  - d. 3 minutes

35. A particulate respirator can protect you from:
- a. Carbon dioxide
  - b. Dust
  - c. Carbon monoxide
  - d. All of the above
36. It is legal to transport personnel:
- a. In the cargo space of a dump
  - b. Outside the cab of a loader
  - c. In the bucket of a loader
  - d. None of the above
37. What method or methods are required by MSHA to prevent injury to an operator of a cab or scraper?
- a. Berms
  - b. Rollover cabs or ROPS
  - c. Seatbelts
  - d. All of the above
38. The soil and dirt covering coal in surface mining is called:
- a. Spoilage
  - b. Overburden
  - c. Terrain
  - d. Iron ore
39. A respirator should be worn:
- a. Whenever there is a lot of dust
  - b. While spraying paint or welding
  - c. When dust levels are high
  - d. All of the above



## **ANSWER SHEET FOR HAULAGE AND DUST CONTROL**

1. b  
2. c  
3. d  
4. c  
5. a  
6. c  
7. a  
8. b  
9. b  
10. a  
11. c  
12. d  
13. c

14. a  
15. d  
16. c  
17. c  
18. a  
19. d  
20. a  
21. c  
22. c  
23. b  
24. a  
25. d  
26. d

27. a  
28. d  
29. c  
30. d  
31. c  
32. c  
33. d  
34. a  
35. b  
36. d  
37. d  
38. b  
39. d

## **SAMPLE QUESTIONS FOR GAS AND MINE FIRES**

1. What is a typical source of spontaneous combustion fires?
  - a. Oily rags
  - b. Coal
  - c. Mine refuse
  - d. All of the above
2. Which of the following is prohibited in or near a vehicle containing explosives?
  - a. Cigarettes
  - b. Matches
  - c. An open flame
  - d. All of the above
3. What is the minimum distance apart detonator and explosive storage magazines must be located?
  - a. 15 feet
  - b. 25 feet
  - c. 40 feet
  - d. 50 feet
4. Flammable liquids shall not be stored within 100 feet of:
  - a. Shafts
  - b. Snow sheds
  - c. Fans
  - d. All of the above
5. How often must fire extinguishers be checked?
  - a. Monthly
  - b. Quarterly
  - c. Biannually
  - d. Annually
6. Buildings in which oil, grease, flammable liquids or other flammable materials are stored shall be:
  - a. Well ventilated
  - b. Of fire resistant construction
  - c. Provided with means to control spilled flammable liquids
  - d. All of the above
7. What is the product of incomplete combustion?
  - a. Carbon monoxide
  - b. Hydrogen
  - c. Carbon dioxide
  - d. Nitrogen

8. No smoking signs must be posted:
- At every gate
  - In places where fire or explosions hazards exist
  - In the dressing rooms, lunch rooms and other areas
  - All of the above
9. Fires in wood, paper and cloth are classified as:
- Class A fires
  - Class B fires
  - Class C fires
  - Class D fires
10. How much coal dust is sufficient to propagate a coal dust explosion?
- 1/2 ounce
  - 1-1/2 ounce per cubic foot
  - 1 ounce per foot
  - 2 ounces per cubic foot
11. Methane and normal air mixture will not explode if the air mixture is below what percent of oxygen?
- 12.1%
  - 14.3%
  - 16.5%
  - 19.5%
12. Gasoline-powered equipment:
- May be fueled while running
  - Must be shut off while fueling
  - Is not permissible on a mine site
  - Has more power; therefore, it must be handled with more caution
13. Electrical fires should be fought with:
- Acid and foam extinguishers
  - Dry dust extinguisher
  - Wet sand
  - Water
14. Which is a flammable liquid:
- One having a flashpoint below 100<sup>0</sup> F
  - One having a flashpoint between 100-140<sup>0</sup> F
  - One having a flashpoint greater the 140<sup>0</sup> F
  - One having an auto ignition temperature below 150<sup>0</sup> F

15. What should be part of any vehicle transporting explosives?
  - a. Warning markings
  - b. Additional storage space for supplies
  - c. Additional space for workers
  - d. Flashing red lights
16. During what type of mining operations would a person possibly come in contact with oxides of nitrogen?
  - a. Drilling
  - b. Scaling overburden
  - c. Blasting
  - d. Splicing
17. What effect does coal dust in the air have upon the explosiveness of methane?
  - a. The lower explosive limit is decreased
  - b. The lower explosive limit is increased
  - c. The upper explosive limit is increased
  - d. The upper explosive limit is decreased
18. 125 lb. Multipurpose dry powder extinguishers shall be used in a preparation plant when:
  - a. Water is not available
  - b. There is a problem with freezing lines
  - c. Both a and b
  - d. None of the above
19. Methane checks shall be made in structures where coal is handled or stored:
  - a. Once each day
  - b. Once each week
  - c. Twice each day
  - d. Once each shift
20. Coal fires are usually started by:
  - a. Electricity
  - b. Matches
  - c. Lightning
  - d. Spontaneous combustion
21. The primary or "front line" fire fighting tool to be used:
  - a. A fire truck
  - b. Shovels and rakes
  - c. Chemical fire extinguishers
  - d. Sand

22. Normal air contains:
- Oxygen 16.25%, Nitrogen 81.75%, Carbon Monoxide 2%
  - Oxygen 22.9%, Nitrogen 74.1%, Carbon Dioxide .03%
  - Oxygen 20.93%, Nitrogen 78.10%, Carbon Dioxide .03%
  - Oxygen 20%, Nitrogen 78.10%, Carbon Dioxide 1% other gases
23. Which is not a property of methane?
- Chemical formula is  $\text{CH}_4$
  - Effect on life passes off in fresh air
  - Specific gravity is 0.555
  - It is poisonous
24. When a small fire is spotted, personnel should have been trained:
- To turn in alarm immediately
  - To notify their supervisors
  - To extinguish the fire
  - None of the above
25. Gauges and regulators used with oxygen or acetylene cylinders shall be:
- Stored in properly marked containers
  - Kept clean and free of oil and grease
  - Kept clean of dust and dirt
  - b and c
26. Continuous methane monitoring devices shall automatically de-energized equipment when:
- Monitor is not working properly
  - Methane content reaches 2.0%
  - Methane content reaches 1.0%
  - a and b
27. A Class B fire is:
- Gasoline
  - Paper
  - Coal
  - All of the above
28. Methane tends to concentrate:
- In low places due to its specific gravity
  - In high places due to its specific gravity
  - In equal parts throughout the atmosphere
  - Near battery charging stations

29. Breathing air from fires is dangerous because it contains:
- Methane
  - H<sub>2</sub>S
  - CO
  - CO<sub>2</sub>
30. Methane may be found in the following situations except:
- Decomposition of vegetable matter in water
  - Incomplete combustion of explosives
  - Clay resins cutting through a seam being mined
  - All of the above
31. What is the maximum percentage of methane allowed in surface installations?
- 0.5%
  - 1.0%
  - 1.5%
  - 2.0%
32. Which of the following is a product of complete combustion?
- Hydrogen sulfide
  - Methane
  - Carbon dioxide
  - Nitrogen
33. Welding, cutting or soldering may not commence or continue where methane is
- likely to be present:
    - If the temperature is below 00 F
    - If there is 1% or more methane present
    - If a qualified person is not present
    - b and c only
34. Define "Class C" fires:
- Flammable liquids
  - Electrical
  - Papers, rags, rubbish
  - All of the above
35. Oil and grease, along with other flammable liquids or material, must be stored:
- In open area with a 10-foot fence around the storage area
  - Along with oxygen cylinders
  - In containers of not more than five gallons
  - In fire resistant buildings or rooms that are well ventilated

36. The explosive range of methane in normal air is:
- 0-25%
  - 10-52%
  - 5-15%
  - 12-24%
37. The percentage of CO which will produce unconsciousness in 30 minutes is:
- 1-10%
  - 30-50%
  - 20-30%
  - 25-35%
38. Tunnels located below stockpiles, surge piles and coal structures shall be ventilated so as to maintain concentrations of methane of what percent?
- 0.5%
  - 1.0%
  - 1.5%
  - 2.0%
39. When flammable liquids are spilled they should be:
- Washed or diluted with water
  - Burned away with a control fire
  - Removed, controlled or confined immediately
  - All of the above
40. How many portable fire extinguishers are required on each combustible liquid storage installation:
- 2 at each entrance
  - 1 at each entrance
  - 2 near each surface installation and 2 near each transfer pump for buried storage.
  - 2 near each surface installation and 1 near each transformer for buried storage
41. Fire-fighting hoses shall be pressure tested:
- Monthly
  - Semi-annually
  - Annually
  - According to manufacturer's instructions
42. Continuous methane monitoring devices shall give an automatic warning signal when methane content reaches:
- 0.5%
  - 1.0%
  - 1.5%
  - 2.0%

43. Miners should know the mine emergency evacuation procedures for:
- a. Emergency assembly
  - b. Transport procedures
  - c. Evacuation drills
  - d. All of the above
44. What is the explosive range of CO?
- a. 12.5–75%
  - b. 15.2-15%
  - c. 10.0-64%
  - d. 14.0-64%
45. A continuous methane monitoring device shall be set to:
- a. Give an automatic warning when the concentration of methane reaches a certain maximum, not exceed 1%
  - b. Automatically shut off electrical equipment if the device is malfunctioning
  - c. Automatically shut off electrical equipment when the methane content reaches 2%
  - d. All of the above



## **ANSWER SHEET FOR GAS & MINE FIRES**

1. d
2. d
3. b
4. c
5. c
6. d
7. a
8. b
9. a
10. b
11. a
12. b
13. b
14. a
15. a
16. c
17. a
18. c
19. d
20. d
21. c
22. c
23. d

24. c
25. d
26. b
27. a
28. b
29. c
30. b
31. b
32. c
33. d
34. b
35. d
36. c
37. c
38. b
39. c
40. c
41. c
42. b
43. d
44. a
45. d

## **SAMPLE QUESTIONS FOR FIRST AID**

1. Blood is moved through the body in a series of large and small blood vessels, arteries, veins, and capillaries. How is the pressure supplied to circulate the blood?
  - a. Movement of the body
  - b. Body heat
  - c. The concentration and expansion (pumping action) of the heart
  - d. None of the above
  
2. Treatment for a skull fracture includes \_\_\_\_\_.
  - a. Placing the patient's head lower than the rest of his body
  - b. Applying cold compresses to the region of the fracture
  - c. Placing the patient's head on the side of suspected fracture
  - d. None of the above
  
3. Scalds result from \_\_\_\_\_.
  - a. Fire
  - b. Electricity
  - c. Steam vapors or hot solution
  - d. None of the above
  
4. What is the treatment for acids in the eye?
  - a. Wash the eye out with base solution
  - b. Wash the eye out with antiseptic
  - c. Wash the eye out with water
  - d. Wash the eye out with soapy water
  - e. None of the above
  
5. When a victim has been revived and is breathing normally, they should be \_\_\_\_\_.
  - a. Kept warm and quiet, (lying down), to avoid strain on their heart
  - b. Stood up
  - c. Administered a stimulant
  - d. None of the above
  
6. When one rescuer performs CPR, the ratio of chest compressions to lung inflations for an adult victim is \_\_\_\_\_.
  - a. 12 compressions to 2 ventilations
  - b. 5 compressions to 1 ventilation
  - c. 7 compressions to 1 ventilation
  - d. 15 compressions to 2 ventilations

7. After opening the airway, if a rescuer sees chest movements in an unconscious victim, he/she should \_\_\_\_\_.
  - a. Not initiate any CPR procedure
  - b. Assume the victim is breathing
  - c. Listen and feel for breathing with ear near victim's mouth
  - d. Perform only chest compressions
8. The second step in removing an obstruction from an unconscious patient with an airway obstruction is to \_\_\_\_\_.
  - a. Clean out the mouth and throat
  - b. Position the head and jaw
  - c. Force air into the lungs
  - d. Perform the Holger-Nielson
  - e. None of the above
9. One of the symptoms of a fractured back is \_\_\_\_\_.
  - a. Partial or total paralysis
  - b. Severe nosebleed
  - c. Swelling in the lower legs
  - d. None of the above
10. To determine whether or not an unconscious adult victim has a pulse, the rescuer should palpate the pulse \_\_\_\_\_.
  - a. At the carotid artery in the neck
  - b. At the femoral artery in the groin
  - c. At the brachial artery in the arm
  - d. At the radial artery in the wrist
  - e. None of the above
11. When an artery has been cut, use a pressure point \_\_\_\_\_.
  - a. A point between the heart and the wound
  - b. Above the heart
  - c. At a point on the side of the wound away from the heart
  - d. None of the above
12. How should minor wounds be dressed?
  - a. Wash them with antiseptic and give the patient stimulants
  - b. Apply a heat application
  - c. Apply tourniquet and bind in place
  - d. Cover the wound with a sterile compress and an outer dressing
  - e. None of the above

13. The universal distress signal characterizing an apparent obstructed airway in the conscious adult is \_\_\_\_\_.  
a. Rapid heavy breathing  
b. Violent choking  
c. Victim's hand at their throat  
d. Violent thrashing of the victim's arms  
e. None of the above
14. What are the symptoms of internal hemorrhage?  
a. Flushed face, constricted pupils, slow pulse  
b. Pale face, dilated pupils, shallow and rapid breathing, rapid pulse, cold clammy skin  
c. Bloated face, skin hot and dry, fever  
d. All of the above  
e. None of the above
15. Describe the treatment for apoplexy (commonly called a stroke).  
a. Elevate head and shoulders and apply cold cloths to the head  
b. Give an emetic followed by aromatic spirits of ammonia  
c. Keep head low, use heat applications and give stimulants  
d. Administer a sedative and keep the patient flat on their back  
e. None of the above
16. When a patient has a deep chest wound, there is danger of \_\_\_\_\_.  
a. Bleeding in the lung  
b. The lung collapsing  
c. Fractured ribs causing lung collapse  
d. All of the above  
e. None of the above
17. When two rescuers perform CPR, the ratio of chest compressions to lung inflations for an adult victim is \_\_\_\_\_.  
a. 15 compressions to 2 ventilation  
b. 7 compressions to 1 ventilation  
c. 5 compressions to 1 ventilation  
d. 12 compressions to 2 ventilations  
e. None of the above
18. When administering artificial respiration and the victim's stomach starts to swell, what should you do?  
a. Ignore it  
b. Speed up the ventilations  
c. Turn the victim's head to the side and lightly push on their stomach to expel the air. Reposition their head and start again  
d. None of the above

19. Blood is made up of both liquid and cellular parts. The cellular parts that combine with oxygen and transport it to the body cells are called \_\_\_\_\_.
- Platelets
  - White cells
  - Red cells
  - Fibrins
  - None of the above
20. When blood vessels are ruptured under the skin causing swelling and discoloration, the wound is known as a \_\_\_\_\_.
- Rupture hernia
  - Bruise
  - Strain
  - None of the above
21. Without an adequate and continuing supply of oxygen, the cells of the brain and nervous system generally die \_\_\_\_\_.
- Immediately
  - Within two minutes
  - Within four to six minutes
  - In about ten minutes
  - None of the above
22. Which of the following can cause failure to ventilate the victim's lung adequately?
- Excessive air in the stomach
  - Inadequate head tilt
  - Lack of an airtight seal
  - All of the above
  - None of the above
23. A "rule of thumb" in surveying a patient for an airway obstruction is to tilt his head back and \_\_\_\_\_.
- Look for breathing movements in the chest
  - Listen for airflow at the mouth and nose
  - Feel for air exchange
  - All of the above
  - None of the above
24. As a rule, the loss of two pints of blood in the average 150 pound male can cause \_\_\_\_\_.
- No ill effects
  - Slight effects
  - Moderate effects
  - Serious effects
  - None of the above

25. When dressing a burn, the bandage should be applied loosely after it has been dipped in \_\_\_\_\_.
- a. Grease or oil
  - b. A water and oil preparation
  - c. Cold sterile water
  - d. None of the above
26. The pulse of a victim suspected of experiencing cardiac arrest should be checked \_\_\_\_\_.
- a. Immediately after opening the airway
  - b. After the first four ventilations
  - c. After the first two ventilations
  - d. Before ventilations are given
  - e. None of the above
27. A stretcher made of two long poles with canvas stretched between is called \_\_\_\_\_.
- a. A stretcher board
  - b. An improvised stretcher
  - c. An army stretcher
  - d. A Wesson stretcher
  - e. None of the above
28. The first step in removing an obstruction from an unconscious patient with an airway obstruction is to \_\_\_\_\_.
- a. Manually clean out the mouth and throat if the obstruction is visible
  - b. Position the head and jaw
  - c. Force air into the lungs
  - d. Give a firm blow between the shoulder blades
  - e. None of the above
29. Before starting CPR, the first thing to do when coming upon an unconscious person is \_\_\_\_\_.
- a. Obtain permission from the victim's family
  - b. Position the victim
  - c. Establish unresponsiveness
  - d. Provide artificial ventilation to the lungs
  - e. None of the above
30. In applying an inflatable plastic splint to fracture with an open wound, you should \_\_\_\_\_.
- a. Roll up or cut away clothing from the injured part
  - b. Inflate the splint before applying it
  - c. Dress the wound
  - d. Both a and c
  - e. None of the above

31. When performing external chest compressions on an adult, the sternum should be depressed \_\_\_\_\_.  
a. 1/2 to 1 inch  
b. 1 to 1-1/2 inches  
c. 1-1/2 to 2 inches  
d. 2 to 2-1/2 inches  
e. None of the above
32. What is the treatment for removing small foreign bodies in the eye which are not embedded?  
a. Wash out with clean water or prepared eye wash solution  
b. Do not remove; cover the eye with gauze  
c. rub the foreign matter out with sterile gauze  
d. Remove with blunt instruments; apply antiseptics  
e. None of the above
33. When changing rescuers during the administration of artificial respiration, the most important factor is \_\_\_\_\_.  
a. Not allowing the first rescuer to become too tired  
b. Moving quickly while changing position  
c. To maintain a constant rhythm  
d. None of the above
34. Venous bleeding should be suspected when \_\_\_\_\_.  
a. The blood is bright red and slowing steadily from the wound  
b. The blood is bright red and spurting from the wound  
c. The blood is dark maroon and is flowing steadily from the wound  
d. The blood is dark maroon and spurting from the wound  
e. None of the above
35. Where is the subclavian pressure point located?  
a. Inside the thigh, one hand-span from the groin  
b. Back of the knee  
c. Under the collar bone  
d. None of the above
36. Gastric distension during CPR is caused by \_\_\_\_\_.  
a. Air entering the victim's stomach  
b. Inadequate exhalation of the unconscious victim  
c. Excessive fluids in the stomach  
d. Excessive chest compressions  
e. None of the above

37. Arterial bleeding should be suspected when \_\_\_\_\_.  
a. The blood is bright red and flowing from the wound  
b. the blood is bright red and is spurting from the wound  
c. The blood is dark maroon and is flossing steadily from the wound  
d. The blood is dark maroon and is spurting from the wound  
e. None of the above
38. When should treatment for physical shock be started?  
a. Not until the patient is resting comfortably  
b. As soon as the patient has been brought outside  
c. Not until medical assistance has been obtained  
d. Immediately after bleeding is controlled  
e. None of the above
39. Artificial respiration can best be defined as \_\_\_\_\_.  
a. The process of causing air to flow into and from the lungs when natural breathing has ceased  
b. Administration of oxygen under pressure  
c. The process of getting oxygen into the blood  
d. Advance life support  
e. None of the above
40. Closed wounds are injuries that \_\_\_\_\_.  
a. Bleed freely  
b. Occur without a break in the skin  
c. Are caused by sharp instruments  
d. None of the above
41. The rate of rescue breathing in an adult is \_\_\_\_\_.  
a. Four times per minute  
b. 12 times per minute  
c. 20 times per minute  
d. 28 times per minute  
e. None of the above
42. What are the systems of a rupture?  
a. A dull ache and internal bleeding  
b. Dull pain, swelling and discoloration  
c. A sharp, stinging pain with swelling; nausea may occur  
d. None of the above



43. If blood spurts from the wound and is bright red in color, what kind of damage is indicated?
- a. A broken bone
  - b. A cut or severed artery
  - c. A cut vein
  - d. None of the above
44. Every stretcher should be tested before placing the patient on it. The testing should be done by \_\_\_\_\_.
- a. The bearer at the head of the stretcher
  - b. The largest bearer
  - c. Someone who weighs as much or more than the patient
  - d. None of the above
45. If vomiting occurs during the resuscitation effort, the best immediate procedure to follow is \_\_\_\_\_.
- a. Insert a nasal-gastric tube
  - b. Pause for a moment until the patient appears quiet again, then resume
    - i. mouth-to-mouth ventilation
  - c. Switch to mouth-to-nose ventilations
  - d. Turn the patient's body to the side, sweep out the mouth and resume CPR
  - e. None of the above
46. If you suspect that a conscious patient has a broken back, you can check for paralysis by \_\_\_\_\_.
- a. Touching the soles of the feet with a sharp, pointed object
  - b. Moving the arms and legs
  - c. Asking the patient if they have feeling in the their legs
  - d. Both a and c
  - e. None of the above
47. To provide warmth for a victim of shock, you would \_\_\_\_\_.
- a. Place a blanket over and under the victim
  - b. Place containers of hot water near the victim
  - c. Move the victim to a warm building
  - d. None of the above
48. If a person has stopped breathing as a result of contact with an electric wire or appliance, the first thing you should do is \_\_\_\_\_.
- a. Give artificial respiration
  - b. Loosen their clothing at the neck and waist
  - c. Check to see if the victim is still in contact with the electrical current before touching them
  - d. Pull the victim to away from the electrical wire or appliance
  - e. None of the above

49. Sprains are most frequently caused by \_\_\_\_\_.  
a. A blow from a heavy blunt object  
b. Falling  
c. Twisting or wrenching a joint  
d. None of the above
50. Bleeding can normally be stopped by \_\_\_\_\_.  
a. Elevating the victim's feet  
b. Applying hot packs to the wound  
c. Applying direct pressure to the wound with a sterile pad or bandage
51. What is a symptom of a fracture of the lower spine?  
a. Unable to move the legs  
b. Unable to move the arms  
c. Increased sensitivity to cold in the legs  
d. Able to bend the knees but not wiggle toes  
e. None of the above
52. Complications which may result from chest compressions even when properly performed include \_\_\_\_\_.  
a. Punctured lungs  
b. Laceration of the liver  
c. Fractured ribs and sternum  
d. All of the above  
e. None of the above
53. When a foreign body is lodged in the throat, the person with first aid training would \_\_\_\_\_.  
a. Give artificial respiration first  
b. Give him something to drink  
c. Slap him sharply on the back between the shoulder blades  
d. Perform the Holger-Nielson method  
e. None of the above
54. Which of the following sign and symptoms is **not** an indication of shock?  
a. The patient's eyes are dull and lack luster  
b. Constricted pupils  
c. Shallow respiration, possibly irregular or labored  
d. cold and clammy skin

55. Keeping the heel of the hand lightly in contact with the chest during the relaxation phase of chest compression is important because \_\_\_\_\_.  
a. Over expansion of the chest is avoided  
b. correct hand position can be maintained  
c. Stomach distension can be prevented  
d. the heartbeat can be felt  
e. None of the above
56. Blood volume depends on body weight, but as a rule of the thumb it is agreed that the average adult male has \_\_\_\_\_.  
a. 7 to 9 pints of blood  
b. 10 to 12 pints of blood  
c. 13 to 15 pints of blood  
d. 15 to 17 pints of blood  
e. None of the above
57. The most important factor in giving artificial respiration is \_\_\_\_\_.  
a. The method used  
b. Positioning the victim properly  
c. Starting artificial respiration as soon as possible  
d. Allowing time for the victim to recover on their own  
e. None of the above
58. Never move a patient to a stretcher until he has been examined and his injuries have been \_\_\_\_\_.  
a. Recorded on a piece of paper  
b. Treated by properly applied dressings and supports  
c. Seen by a Doctor  
d. None of the above
59. To perform chest compressions on an adult, one hand is placed on the top of the other with the heel of the lower hand pressing \_\_\_\_\_.  
a. Over the bottom end of the sternum  
b. Over the upper third of the sternum  
c. Over the top end of the sternum  
d. This is determined by proper finger and hand placement using the rib  
    ii. cage and the notch where the ribs meet the sternum as a guide  
e. None of the above

60. How should a compound fracture of the thigh with arterial bleeding be dressed?
- Apply a tourniquet if needed and cover the wound with a compress bandage
  - Apply a splint from the top of the shoulder to three inches beyond heel
  - With one splint from the armpit to the heel and one from the crotch to the heel
  - With one splint from the crotch to the heel, secure tightly
  - With one splint from the armpit to the heel, bind to other leg
  - None of the above
61. You respond to a call and find a man who has burns on the chest and the front of each arm after a flash fire caused by a gasoline container. Using the "rule of nines", calculate the approximate percentage of body area burned.
- Nine percent
  - Eighteen percent
  - Twenty-seven percent
  - Thirty-six percent
  - None of the above
62. If a victim's mouth is distorted after a serious facial accident, and the victim is not breathing, you should \_\_\_\_\_.
- Hold the mouth shut and ventilate through their nose
  - Still use the mouth
  - There is nothing you can do
  - None of the above
63. The loss of blood can cause death in a short time. The amount varies, but death can result from the loss of \_\_\_\_\_.
- Three pints of blood
  - One pint of blood
  - One-half pint of blood
  - None of the above
64. In the care for an open wound, the first thing you should do is \_\_\_\_\_.
- Stop the bleeding
  - Brush away dirt from the wound
  - Wash the wound with water
  - All of the above
  - None of the above
65. Blood supplies oxygen to the tissues in the body. Where does the blood acquire the oxygen?
- From the air
  - From the heart
  - From the lungs
  - None of the above

66. Before giving mouth-to-mouth resuscitation, the first thing the rescuer should do is \_\_\_\_\_.
- a. Remove all foreign objects from the victim's mouth
  - b. Pinch the nostrils closed
  - c. Take a deep breath
  - d. Tilt the victim's head back
67. If the skin is blistered, the burn is considered a \_\_\_\_\_.
- a. First degree burn
  - b. Second degree burn
  - c. Third degree burn
  - d. Fourth degree burn
  - e. None of the above
68. The temporal pressure point is used to control bleeding from \_\_\_\_\_.
- a. The hand
  - b. The scalp
  - c. The forearm
  - d. None of the above
69. Which of the following are symptoms of shock?
- a. A reddish color to the skin and vomiting
  - b. Heavy breathing at a rate of 12 to 15 times per minute
  - c. Cold, moist skin and a weak pulse
  - d. None of the above
70. With a Three-Man Lift and Carry, the command refers to \_\_\_\_\_.
- a. Supporting the patient on the bearers' knees
  - b. Turning the patient on his side toward the bearers' chest
  - c. Getting into a standing position with the patient
  - d. None of the above
71. The method of artificial respiration considered most efficient is \_\_\_\_\_.
- a. The Holger-Nielson (back-pressure, arm-lift) method
  - b. Mouth-to-mouth resuscitation
  - c. The Shafer (prone-pressure) method
  - d. All above methods are equally efficient
72. A burn characterized by charring of the skin is classified as \_\_\_\_\_.
- a. A first degree burn
  - b. A second degree burn
  - c. A third degree burn
  - d. A partial thickness burn
  - e. None of the above

73. One symptom of a fractured skull is \_\_\_\_\_.  
a. A mixture of blood and serum is flowing from one or both ears  
b. A deformity of the cheekbone  
c. Unconsciousness  
d. Both b and c  
e. None of the above
74. Two passageways extend downward from the throat. The tube that carries solid and liquid matter to the stomach is called the esophagus. The tube that carries air to the lungs is called the \_\_\_\_\_.  
a. Trachea  
b. Epiglottis  
c. Bronchus  
d. Larynx  
e. None of the above
75. Do not lower the head of a victim of shock when \_\_\_\_\_.  
a. The victim is partially or totally unconscious  
b. There is severe bleeding from the head  
c. The victim has been vomiting  
d. Both a and b  
e. None of the above
76. Abrasions are wounds that \_\_\_\_\_.  
a. Bleed freely  
b. Are deep  
c. Are caused by rubbing or scraping the surface  
d. None of the above
77. Severe bleeding from the forearm may be controlled by finger pressure on the  
b. \_\_\_\_\_.  
a. Femoral artery  
b. Temporal artery  
c. Radial artery  
d. Brachial artery  
e. None of the above
78. A pressure point is \_\_\_\_\_.  
a. Any point on the body above the wound  
b. A point where blood vessels pass close to the surface of the skin and over a bony structure  
c. A point at the center of the wound  
d. None of the above

79. When the chest muscles contract and pull the rib cage out and the diaphragm moves downward, the lungs expand and air rushes in. This phase of breathing is known as \_\_\_\_\_.
- a. Respiration
  - b. Expiration
  - c. Inhalation
  - d. Ventilation
  - e. None of the above
80. What is apoplexy (commonly called a stroke)?
- a. A dislocated shoulder
  - b. Severe bleeding from the chest
  - c. A hemorrhage in the brain
  - d. Collapsed lungs
  - e. None of the above
81. When using compressed oxygen to supplement artificial respiration, it is important to open the valve slowly with the oxygen flow \_\_\_\_\_.
- a. Directed away from you and the victim
  - b. Directed into a cap or handkerchief
  - c. Where there is a fire extinguisher
  - d. None of the above
82. One complication that may develop from a fractured rib \_\_\_\_\_.
- a. A punctured lung
  - b. A collapsed lung
  - c. Increased respirations
  - d. Both a and c
  - e. None of the above
83. Common errors committed when performing mouth-to-mouth ventilations include \_\_\_\_\_.
- a. Inadequate extension of the patient's head
  - b. Failure to open the patient's mouth wide enough
  - c. Forgetting to seal the patient's nose and mouth
  - d. All of the above are common errors
  - e. None of the above
84. How should dressing be applied to burns?
- a. Loosely
  - b. Tightly
  - c. Firmly
  - d. With the knot tied over the dressing
  - e. None of the above

85. To arouse an unconscious victim of fainting, you should \_\_\_\_\_.  
a. Give the victim a solution of water, salt and soda  
b. Pass an open ampoule of spirits of ammonia under the victim's nose  
c. Give the victim coffee or tea  
d. None of the above
86. The most obvious cause of airway obstruction is accumulation of foreign matter in the mouth, throat or windpipe. Another cause of airway obstruction occurs in the unconscious person who has their head \_\_\_\_\_.  
a. Extended backwards  
b. Flexed forward  
c. Hyperventilated  
d. Hypoventilated
87. A constricting bandage should be applied for venous bleeding \_\_\_\_\_.  
a. Directly over the wound  
b. Always below the wound  
c. Over uninjured tissue above or below the wound and as near to the wound as possible  
d. None of the above
88. Bleeding from superficial cuts generally stops either little or no attention because of a process known as clotting. Clotting results from the action of \_\_\_\_\_.  
a. Red corpuscles  
b. White corpuscles  
c. Plasma  
d. Platelets  
e. None of the above
89. A partial obstruction of the airway by the tongue is characterized by which of the following sounds?  
a. Crowing  
b. Sighing  
c. Snoring  
d. Whistling  
e. None of the above
90. One requirement of a splint is \_\_\_\_\_.  
a. That it be soft and pliable  
b. That it be long enough to prevent movement of the joints on both sides of the fracture  
c. That it be narrower than the limb  
d. None of the above



91. Deep, gasping, labored respiration is an indication of \_\_\_\_\_.  
a. An airway obstruction  
b. Lung damage  
c. Respiratory arrest  
d. Cardiac arrest  
e. Both a and b
92. If you suspect damage to the spinal cord \_\_\_\_\_.  
a. Have the patient sit up  
b. Turn the patient onto his back  
c. Don't move the patient until he has been secured to a splint  
d. None of the above
93. A noticeable, grayish-blue color in the tongue, lips, nail beds and skin is a sign that the brain is getting insufficient oxygen. This sign is called \_\_\_\_\_.  
a. Silicosis  
b. Halitosis  
c. Cyanosis  
d. Synbiosis  
e. None of the above
94. The entire supply of blood in the body circulates through the body in an average time of \_\_\_\_\_.  
a. 45 seconds  
b. 75 seconds  
c. 90 seconds  
d. None of the above
95. The treatment for dislocation includes \_\_\_\_\_.  
a. Strapping the dislocated limb to the body  
b. Immobilizing the dislocation to prevent further injury  
c. Applying a dressing to the affected joint  
d. None of the above
96. The air we breathe contains \_\_\_\_\_.  
a. 100% oxygen  
b. Approximately 20% oxygen and 80% nitrogen and other gases  
c. Approximately 30% oxygen and 70% other gases  
d. About 50% oxygen and 50% other gases  
e. None of the above
97. The first step in treating for shock is  
a. Give a stimulant  
b. Sit the victim in a chair  
c. Lay the victim down  
d. None of the above

98. Punctured wounds are \_\_\_\_\_.  
a. Produced by a sharp cutting object  
b. Usually narrow and deep  
c. Easily infected  
d. Both a and c  
e. None of the above
99. In treating fractures, your first consideration should be \_\_\_\_\_.  
a. To prevent any further injury by careless or improper handling  
b. Have the patient move the affected part  
c. Turn the patient onto their backs  
d. None of the above
100. When treating a patient with a fractured pelvis, you should \_\_\_\_\_.  
a. Put the patient in a sitting position  
b. Bend the patient's hip and waist  
c. Apply wide cravat bandages to support the hip region  
d. None of the above

## ANSWER SHEET FOR FIRST AID

1.	c	35.	c	68.	b
2.	d	36.	a	69.	c
3.	c	37.	b	70.	a
4.	c	38.	d	71.	b
5.	a	39.	a	72.	c
6.	d	40.	b	73.	d
7.	c	41.	b	74.	a
8.	b	42.	c	75.	e
9.	a	43.	b	76.	c
10.	a	44.	c	77.	d
11.	a	45.	d	78.	b
12.	d	46.	c	79.	c
13.	c	47.	a	80.	c
14.	b	48.	c	81.	a
15.	e	49.	c	82.	a
16.	d	50.	c	83.	d
17.	c	51.	a	84.	a
18.	c	52.	c	85.	b
19.	c	53.	e	86.	b
20.	c	54.	b	87.	a
21.	c	55.	b	88.	d
22.	b	56.	b	89.	c
23.	d	57.	c	90.	b
24.	d	58.	b	91.	a
25.	d	59.	d	92.	c
26.	a	60.	c	93.	c
27.	a	61.	d	94.	b
28.	a	62.	a	95.	b
29.	c	63.	a	96.	b
30.	a	64.	a	97.	c
31.	c	65.	c	98.	b
32.	a	66.	a	99.	a
33.	c	67.	b	100.	c
34.	a				